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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/658,128

09/09/2003

Daniel J. Vavrick

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10/20/2006

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EXAMINER

GELLNER, JEFFREY L.

ART UNIT

PAPER NUMBER

3643

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/658,128

Applicant(s)

VAVRICK, DANIEL J.

Examiner

Jeffrey L. Gellner

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9, 11, 12, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 11, 12, 29, 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7, 9, 11, 12, 29, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 4 and 5, there is a Markush grouping for the material that includes either finely divided metal particles or finely divided metal oxide particles, individually. This language disagrees, or contradicts, with the language of lines 5 and 6 where the claim positively claims a thermite mixture. Hence, the claim is indefinite because it is unclear whether Applicant is claiming a mixture or finely divided metal particles or finely divided metal oxide particles, individually, and how either constituent, individually, would constitute thermite.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 9, 11, 12, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Schweizer et al. (US 2001/0002297 A1).

As to claims 1, 2, 9, 11; Schweizer et al. disclose a reactive material ("pyrotechnic layer" of abstract) comprising a metal foam, nickel (para. 0016 and 0061) having voids (para. 0016); a polymer ("binder" of para. 0049 and 0056) imbibed in the void area (para. 0064); and thermite disposed with the polymer (para. 0063 and 0064).

As to claim 12, Schweizer et al. disclose a reactive material ("pyrotechnic layer" of abstract) that is capable of being ordnance.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweizer et al. (US 2001/0002297 A1) in view of Niebylski (US 3,834,881).

As to claim 3, the limitations of claim 1 are disclosed as described above. Not disclosed is the metal comprising aluminum. Niebylski, however, discloses the use of aluminum as a foamed metal (col. 2 lines 1-24). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the material of Schweizer et al. by using aluminum instead of nickel as disclosed by Niebylski so as to have a improved shock absorbency (see Niebylski at col. 1 lines 38-39).

As to claim 4, the limitations of claim 1 are disclosed as described above. Not disclosed is the metal consisting of aluminum. Niebylski, however, discloses the use of aluminum as a

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foamed metal (col. 2 lines 1-24). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the material of Schweizer et al. by using aluminum instead of nickel as disclosed by Niebylski so as to have a improved shock absorbency (see Niebylski at col. 1 lines 38-39).

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweizer et al. (US 2001/0002297 A1) in view of Allen (US 3,309,249).

As to claims 5-7, the limitations of claim 1 are disclosed as described above. Not disclosed is polymer at least partially halogenated, tetrafluoroethylene, teflon. Allen, however, discloses the use of teflon with a binder and thermite (col. 3 lines 45 including language of claim 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the material of Schweizer et al. by using teflon as disclosed by Allen instead of a styrene binder depending upon specific use.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schweizer et al. (US 2001/0002297 A1) in view of Allen (US 3,309,249) in further view of Niebylski (US 3,834,881).

As to claim 30, Schweizer et al. disclose a reactive material ("pyrotechnic layer" of abstract) comprising a metal foam, nickel (para. 0016 and 0061) having voids (para. 0016); a polymer ("binder" of para. 0049 and 0056) imbibed in the void area (para. 0064); and thermite disposed with the polymer (para. 0063 and 0064). Not disclosed is the metal consisting of aluminum and the polymer consisting essentially of tetrafluoroethylene, teflon. Allen, however, discloses the use of consisting essentially of teflon with a binder and thermite (col. 3 lines 45

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including language of claim 1); Niebylski discloses the use of a foamed metal consisting essentially of aluminum (col. 2 lines 1-24). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the material of Schweizer et al. by using teflon as disclosed by Allen instead of a styrene binder depending upon specific use and to further to use aluminum instead of nickel as disclosed by Niebylski so as to have a improved shock absorbency (see Niebylski at col. 1 lines 38-39)..

### ***Response to Arguments***

Applicant's arguments filed 4 August 2006 have been fully considered but they are not persuasive. Applicant's arguments are: (1) the metal foam of Schweizer et al. is inert and does not contribute to the reaction (Remarks top of page 7); and, (2) neither Niebylski nor Allen disclose a metal foam (Remarks page 8).

As to argument (1), as Applicant points out Schweizer et al. discloses that the metal foam reacts with "only a relatively small contribution" at [para. 0007]. Additionally, the claim language does not positively recited that the metal foam is reactive. The structural limitations of Schweizer et al. disclose the invention, whether the metal foam, regardless of the level of reactivity of the metal foam.

As to argument (2), Schweizer et al. discloses a metal foam.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Gellner whose telephone number is 571.272.6887. The examiner can normally be reached on Monday-Friday, 8:30-4:00, alternate.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571.272.6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'J. L. Gellner', with a stylized flourish at the end.

Jeffrey L. Gellner  
Primary Examiner  
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